

ABSTRACT OF THE DISCLOSURE

Disclosed is a highly responsive biosensor comprising a cholesterol-oxidizing enzyme and cholesterol esterase. The biosensor comprises: an electrically insulating base plate; an electrode system including a working electrode and a counter electrode formed on the base plate; a cover member joined with the base plate to define a sample supply pathway through which a sample solution is introduced from a sample supply port to the electrode system, the sample supply pathway being formed between the cover member and the base plate; and a reagent layer formed in the sample supply pathway, wherein the reagent layer contains a cholesterol-oxidizing enzyme, cholesterol esterase, an electron mediator, and a buffer having a buffering capacity in an acidic pH range.